

**REMARKS**

In the Office Action, the Examiner rejected claims 1, 5-11, 13-22, 26-32, 34-43 and 46-57. By the present Response, Applicant has canceled claim 46, amended claims 1, 14, 19, 22, 35, 40, 43, 47-50, 52 and 57 and added claims 58-61. These amendments and new claims do not add any matter. Upon entry of these amendments, claims 1, 5-22, 26-43 and 47-57 will be pending in the present application and are believed to be in condition for allowance. In view of the foregoing amendments and the following remarks, Applicant respectfully requests reconsideration and allowance of all pending claims.

**Specification Amendments**

Herein, Applicant has amended paragraph [0036] of the present application to recite the following: "As illustrated in Figures 1 and 2, exterior casing coating 170 surrounds at least a portion of sleeve 150." Applicant submits that this specification amendment does not add new matter. Indeed, any information contained in any part of the application as filed, including the specification, claims and drawings, may be added to other portions of the application without introducing new matter. See M.P.E.P. § 608.04. As Figures 1 and 2, as originally filed, clearly illustrate that the exterior casing coating 170 surrounds at least a portion of sleeve 150, Applicant submits that this specification amendment does not add new matter.

**Claim Rejections Under 35 U.S.C. § 112**

In the Office Action, the Examiner rejected claims 1, 4-11, 13, 22, 26-32, 34, 43 and 46-50 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Although Applicant does not concede the correctness of the Examiner's reasons for rejection, the Applicant has amended independent claims 1, 22 and 43 as set forth above. Furthermore, Applicant has amended claim 46 to depend from independent claim 43, rather than canceled claim 44. In view of these amendments, the Applicant respectfully requests the Examiner withdraw the rejections under 35 U.S.C. § 112, second paragraph.

**Claim Rejections Under 35 U.S.C. § 102**

In the Office Action, the Examiner rejected claims 1, 5-9, 14-20, 22, 26-32, 35-51, 43 and 46-57 under 35 U.S.C. § 102(b) as being anticipated by Gano, U.S. Patent No. 5,507,346 (hereafter referred to as “the Gano reference”); and rejected claims 1, 6, 8, 9, 14, 15, 18, 19, 22, 27, 29, 30, 35, 36, 39, 40, 43, 46, 48, 50-52, 54, 56 and 57 under 35 U.S.C. § 102(b) as being anticipated by Bol, U.S. Patent No. 4,716,965 (hereafter referred to as “the Bol reference”). The Applicant respectfully traverse these rejections.

***Legal Precedent***

Anticipation under Section 102 can be found only if a single reference shows exactly what is claimed. *See Titanium Metals Corp. v. Banner*, 227 U.S.P.Q. 773 (Fed. Cir.1985). For a prior art reference to anticipate under Section 102, every element of the claimed invention must be identically shown in a single reference. *See In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir.1990).

***Deficiencies of the Gano Reference***

Applicant respectfully submits that the Gano reference does not anticipate Applicant’s claims because it does not disclose each and every claim recitation. For example, independent claims 1, 22 and 43, as amended, recite that “the casing coating *surrounds* at least a portion of the sleeve.” (Emphasis added.) In a similar manner, independent claims 14, 35 and 52, as amended recite “a stress-absorbing material coated on the sleeve to *surround* at least a portion of the sleeve.” (Emphasis added.) The Gano reference does not contain these recitations.

Rather than surrounding the composite liner 26, the composite outer structure 32 of the Gano reference is formed on the composite liner 26 in a *helical pattern*. *See* Gano, Fig. 2. Regarding the outer structure 32, the Gano reference provides: “Formed on the outer surface 32 is the composite outer structure 38 that is comprised of a plurality of overlapping composite band like plies arranged in a plurality of overlapping, *helices* 40, 42 about a centerline of composite liner 26.” Gano, col. 8, lines 23-26 (emphasis added). The composite outer structure 32 clearly does not surround the composite line 26. Accordingly, the Gano reference does not disclose that “the casing coating surrounds at least a portion of

the sleeve,” as recited by independent claims 1, 22 and 36 and as similarly recited by independent claims 14, 35 and 52. In view of these deficiencies, the Gano reference cannot anticipate the present independent claims and their dependent claims.

For at least the foregoing reasons, Applicant requests that the Examiner withdraw the anticipation rejections with respect to the Gano reference.

***Deficiencies of the Bol Reference***

Applicant respectfully submits that the Bol reference does not anticipate Applicant’s claims because it does not disclose each and every claim recitation. Applicant’s present claims are directed to a casing that includes a stress-absorbing material. For example, independent claims 1, 22 and 43 recite a casing that comprises a “*stress-absorbing material*.” In a similar manner, independent claims 14, 35 and 52 recite “a casing coating comprising a “*stress-absorbing material comprising fibers*.”

First, Applicant respectfully submits that the Examiner has improperly equated the elastomeric foam of the Bol reference with the recited “stress-absorbing material.” With respect to stress-absorbing materials, Applicant discloses:

Suitable stress-absorbing materials generally may be materials suitable for use in subterranean operations, *inter alia*, that are capable of reducing the transmission of stress to a cement sheath from a casing string when used in accordance with the methods and apparatus of the present invention. Such materials would include materials that are capable of at least partially enhancing the stress-strain relationship of an embodiment of the improved casing of the present invention as compared to a conventional casing.

Application, ¶ [0030]. The Bol reference discloses the use of sheath 5 of an elastomeric foam that is bonded to the outer surface of casing 1. Bol, col. 2, lines 26-30. Rather than being used for stress-absorbance, the sheath 5 of the elastomeric foam functions to prevent the propagation of a micro-annulus 6. *Id.* at col. 3, lines 3-14. Applicant submits, however, that the elastomeric foam would not function as a suitable stress-absorbing material. Indeed, the elastomeric foam has a density between about 300 and 1100 kg/m<sup>3</sup> and would thereby not suitably function as a stress-absorbing material. *See id.* at col. 2, 29-33. Accordingly, the Bol

reference does not disclose a “stress-absorbing material,” as recited by the present claims. In view of these deficiencies, the Bol reference cannot anticipate the present independent claims and their dependent claims.

Moreover, the Bol reference also does not disclose a “stress-absorbing material comprising *fibers*,” as recited by independent claims 14, 35 and 52.” Rather, as previously mentioned, the Bol reference discloses a sheath 5 of an elastomeric foam. Bol, col. 2, lines 7-12. For example, the Bol reference provides that “the casing-surrounding sheath consists of alternately arranged layers of a closed cell polyurethane foam and a closed cell polyethylene foam.” *Id.* Accordingly, the Bol reference does not disclose a “stress-absorbing material comprising fibers,” as recited by independent claims 14, 35 and 52. In view of these deficiencies, the Bol reference cannot anticipate independent claims 14, 35 and 52 and their dependent claims.

For at least the foregoing reasons, Applicant requests that the Examiner withdraw the anticipation rejections with respect to the Bol reference.

#### **Claim Rejections Under 35 U.S.C. § 103(a)**

In the Office Action, the Examiner rejected claims 10, 11, 13, 21, 34 and 42 under 35 U.S.C. § 103(a) as being unpatentable over the Gano reference. Specifically, the Examiner stated:

Gano discloses a casing collar 36 that hollow cylindrically shaped housing but does not disclose the coating being placed on the housing. Gano teaches that the coating 54 helps provide additional wear resistance (col. 10, lines 19-23). As it would be advantageous to have wear protection on the casing collar it would have been obvious to modify Gano to have a coating on the surface of the casing collar.

Office Action, page 5. The Applicant respectfully traverses this rejection.

#### ***Legal Precedent and Examination Guidelines***

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by modifying the teachings of the prior art to produce the claimed invention

absent some teaching or suggestion supporting the modification. M.P.E.P. § 2142. Accordingly, to establish a *prima facie* case, the Examiner must not only show that the prior art reference includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the prior art. *Id*; see also *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985).

***Deficiencies of the Gano reference.***

Applicant respectfully asserts that the rejections under 35 U.S.C. § 103(a) are deficient for at least two reasons. First, as discussed above, the Gano reference does not teach each and every recitation of the presently amended independent claims. Accordingly, because claims 10, 11, 13, 21, 34 and 42 are dependent from allowable independent claims, they are believed to be equally allowable.

Second, claims 10, 11, 13, 21, 34 and 42 are also allowable by virtue of the subject matter they separately recite. In particular, each of these claims is directed to a casing collar that comprises a stress-absorbing material. For example, claims 10, 21 and 42 recite a “casing collar comprising a stress-absorbing material. In a similar manner, claim 34 recites that “the stress-absorbing material forms a collar coating.”

The Examiner admits that the Gano reference does not disclose a casing collar comprising a stress-absorbing material. See Office Action, page 5. However, the Examiner argues that it would have been obvious to modify the Gano reference to include a coating on the casing collar “[a]s it would be advantageous to have wear protection on the casing collar.” *Id*. Applicant respectfully submits that there is not teaching or suggestion to modify the Gano reference to include a coating on the composite liner 26, as suggested by the Examiner. The Gano reference does disclose the use of an inner use of an inner sacrificial layer 48 and an outer sacrificial layer 54 on the composite liner 26 for wear protection. However, Applicant submits that these layers are provided due to the composite nature of the composite liner 26. See Gano, col. 8, lines 34-44, col. 10, lines 19-24. Indeed, the composite layer 26 of the Gano reference “is comprised of a drillable composite material.” Gano, col. 8, lines 10-14. However, the Gano reference does not disclose that the collars 36 are formed of a drillable

composite material. *See id.* at col. 8, lines 18-22. As such, there is no motivation to include either the inner sacrificial layer 48 or the outer sacrificial layer 54 on the collars 36, as the collars 26 are not formed from a composite material. In view of this teaching of the Gano reference, there is no convincing line of reasoning as to why one of ordinary skill in the art would modify the Gano reference in the manner recited in claims 10, 11, 13, 21, 34 and 42. Accordingly, because the Gano reference does not include each and every recitation of the present claims and there is no convincing line of reasoning to modify the Gano reference, the Examiner has failed to establish a *prima facie* case of obviousness with respect to the present claims.

For at least the foregoing reasons, Applicant requests that the Examiner withdraw the obviousness rejections with respect to the Gano reference.

**Payment of Fees and Authorization for Extensions of Time**

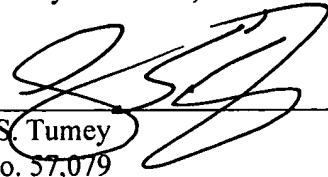
Applicant has authorized the Commissioner is authorized to charge the requisite fee of \$790.00 for the RCE (\$790.00) to the credit card listed on the attached PTO-2038. If any fees, including fees for extensions of time and other reasons, are deemed necessary to advance prosecution of the present application, at this or any other time, Applicant hereby authorizes the Commissioner to charge such requisite fees to Deposit Account No. 06-1315; Order No. HLBT:0019. In accordance with 37 C.F.R. § 1.136, Applicant hereby provides a general authorization to treat this and any future reply requiring an extension of time as incorporating a request thereof.

**Conclusion**

Should the Examiner have any questions, comments or suggestions in furtherance of the prosecution of this application, the Examiner is invited to contact the attorney of record by telephone, facsimile, or electronic mail.

Respectfully submitted,

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